varicella cases for 75% and 65% VE-D1 was respectively 73.9%/71.3% by year 30 and 65.0%/61.6% by year 80. When coverage was 75%/60%, the reduction in number of varicella cases was 60.2%/58.1% by year 30 and 55.0%/52.5% by year 80 for VE-D1 of 75% and 65%, respectively. **CONCLUSIONS:** The coverage of varicella vaccination is an important factor affecting the number of varicella cases when long term interval between two doses is considered. This is a more influential factor on predicted cases than the first dose efficacy.

PIN114

HERPES ZOSTER-RELATED HEALTH CARE RESOURCE UTILIZATION IN CANCER PATIENTS IN 5 EUROPEAN COUNTRIES

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OBJECTIVES: To examine herpes zoster-related health care resource utilization in hematologic (HM) or solid tumor malignancy (STM) patients seeking care at primary-care practices in 5 European countries. **METHODS:** Longitudinal primary-care EMR databases (Cegedim Strategic Data) in France, Italy, Germany, Spain, and United Kingdom (UK) were analyzed retrospectively (2007-2012). Patients with HM or STM diagnoses were followed for a subsequent first herpes zoster (HZ) diagnosis (index event). HZ patients were matched with non-HZ (HM and STM) patients using propensity scores based on demographics and relevant clinical characteristics. Patients were observed for 6 months pre-index (baseline) and 6 months post-index. Demographics, comorbidities, pharmacotherapy, and health care resource utilization (office visits, specialty referrals, laboratory tests, and prescriptions) were reported with statistical significance set at $p \leq 0.05$. **RESULTS:** HZ patients meeting selection criteria across all 5 countries included 907 HM and 4317 STM. Mean ages ranged 64.8±15.5 (Italy-HM) to 71.8±11.5 (France-STM); female gender varied for HM from 49% (UK) to 58% (Germany), and STM 56% (UK) to 63% (France). Case and control populations were well balanced at baseline. Office visits per patient were significantly higher post-index for HZ cohorts across all countries and malignancy types (except Spain HM), ranging from 0.5 more visits (Spain-STM, p=0.009,) to 2.8 more (UK-HM, p<0.001). Significantly more HZ patients had post-index specialty referrals (France-STM, 2.6% more, p=0.05; Germany-STM, 4.8% more, p=0.012), and significantly more HZ patients received prescriptions post-index in all cohorts across all countries, varying from 19.2% more patients (Spain-STM, p<0.001,) to 47.3% (UK-HM, p<0.001). Significantly more HZ patients received laboratory testing, ranging from 3.2% more patients (Italy-STM, p=0.006,) to 11.4% (UK-HM, p=0.003). **CONCLUSIONS:** Significantly higher health care resource use was incurred by HZ-afflicted HM and STM patients within 6 months of HZ diagnosis for office visits, specialty referrals, laboratory testing, and outpatient prescribing compared with matched controls across 5 European countries.

PIN115

USE OF HOSPITAL SERVICES BY HIV PATIENTS, 2012

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OBJECTIVES: Information on the pattern of health services use by HIV patients is required to effectively plan services, particularly in light of increasing non-infectious chronic diseases in this population. This study examined the use of inpatient, outpatient, and emergency department (ED) services by HIV positive patients who attended Cork University Hospital (CUH) for HIV care in 2012. **METHODS:** All public HIV patients who attended CUH for inpatient or outpatient care in 2012 were identified using an existing clinical database. Data on outpatient appointments by speciality (excluding dialysis), ED visits and inpatient episodes were extracted from the hospital information system. Patients with no attendance between Jul-Dec were censored at the month of last visit. **RESULTS:** Data were extracted on 328 patients (3642 patient-months), 1434 outpatient visits (1180 Infectious Disease (ID), 254 other), 100 ED visits (58 patients) and 74 inpatient episodes (51 patients). Patients had a median of 3 ID outpatient visits (range 0-12), 26% of patients also attended other outpatient specialties (median 2, range 1-22). On multivariate analysis being more recently diagnosed, and being on ART but not suppressed, or starting/stopping ART in 2012 were associated with increased outpatient ID visits, while age >50 years was associated with fewer outpatient ID visits. Those diagnosed 2003-2007 and 2008-2011 had significantly more outpatient non-ID visits while late diagnosis was associated with fewer non-ID visits. Use of ED services was positively associated with unknown risk factor and being diagnosed in 2012. Use of inpatient services was positively associated with diagnosis in 2012 and negatively associated with a minimum CD4 count ≥350 cells/µl. **CONCLUSIONS:** These data provide baseline information on the utilisation rates of ID and other specialities by HIV positive patients. Such data are useful for identifying factors which could be targeted for quality improvement interventions as well as for estimating future service requirements.

PIN116

THE IMPACT OF INFLUENZA LIKE ILLNESS (ILI) IN CHILDREN ON WORKING ADULTS

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OBJECTIVES: To evaluate the impact of child ILI on working adults' health, productivity and health care resource use (HCRU); and to evaluate ILI's impact on the children. **METHODS:** Participants ≥18 years, full or part time working and with minimum one child ≤17 years residing in household were recruited nationally (UK) for this online survey between October 2012 and May 2013. Demographics, employment status, morbidities and influenza vaccination history were collected for all household members. During follow-up, households were surveyed fortnightly for influenza vaccination, ILI symptoms, time off work/education, and HCRU. Transmission of ILI from children to adults was estimated. Descriptive statistics were used. **RESULTS:** Across 938 participants/households there were 1895 adults mean age 40.6 years, 52.7% females; 1695 children mean age 8.7 years, 46.8% females. 91/306 adult ILI incidences were related to a child ILI (29.7%, 95%CI:26.5%-33.0%). 69 of these (75.8%, 95%CI:60.3%-91.3%) had symptom duration>3 days, 31/86 employed (36.0%; 95%CI:28.5%-43.6%) reported taking time off work with 22/31 (71.0%; 95%CI:46.2%-95.8%) taking ≥2 days off. 13/91 (14.3%; 95%CI:11.5%-17.1%) had general practice (GP) visits, 5/91 (5.5%; 95%CI:4.5%-6.5%) had GP telephone consultations, 6/91 (6.6%; 95%CI:5.3%-7.8%) received prescriptions, 76/91 (83.5%; 95%CI:66.5-100.6%) used over the counter (OTC) medications because of their ILI. 67 adults reported time off because of child ILIs (310 incidences); 30/67 (44.8%; 95%CI:34.2%-55.4%) taking ≥2 days. This represents 67 adults/152 working adults (44.1%; 95%CI:37.2%-51.0%) in the child ILI households. 180/310 (58.1%; 95%CI:51.7%-64.5%) of total child ILIs had time off education, 81/180 (45.0%; 95%CI:38.5%-51.5%%) taking ≥3 days. 59/310 (19.0%; 95%CI:17.0%-21.1%) had GP visits, 22/310 (7.1%; 95%CI:6.4%-7.8%) had GP telephone consultations, 48/310 (15.5%; 95%CI:13.8%-17.2%) received prescriptions, 234/310 (75.5%; 95%CI:67.1-83.8%) used OTC medications. **CONCLUSIONS:** Based on survey, approximately 1/3 of adult ILIs were related to prior household child ILI. ILI in a household often required absence from work and ILI in children often resulted in time off education. GP visits were the most frequent burden to the National Health Service.

PIN117

COPING WITH METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) IN GERMAN REHABILITATION CENTERS – ARE THE INCENTIVES APPROPRIATE?

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OBJECTIVES: Patients colonized with multidrug-resistant organisms, especially Methicillin resistant Staphylococcus aureus (MRSA), impose a risk on other patients and on health care professionals. In addition, they will suffer from substantial health problems when getting an infection. This contribution examines the incentives of German rehabilitation centers to implement screening strategies to stem nosocomial infections and the spread of MRSA. **METHODS:** Relying on a decision tree analysis, the expected health care cost per capita is calculated for three strategies: (i) general screening, (ii) risk-based screening, both on admission, and (iii) no screening at all. Parameters are taken from the published literature. To handle uncertainty, multivariate sensitivity analyses are performed. **RESULTS:** From the perspective of a rehabilitation center, the third strategy yields the lowest expected cost while the first one causes the highest cost. This ordering is robust with respect to sensitivity analysis. Thus, cost savings due to a lower number of MRSA infections are not sufficient to offset the cost of the test and further prevention measures applied to individuals with a positive result. **CONCLUSIONS:** In Germany, rehabilitation centers are reimbursed by daily rates. In particular, they receive no extra fees for prevention measures. As our analysis demonstrates, this implies the incentive to implement MRSA screening to be too weak. Hence, MRSA prevention measures that would be beneficial to society will not be undertaken. However, our results can be used to indicate changes in the remuneration system that would provide rehabilitation centers with an appropriate incentive for MRSA prevention. Moreover, hygiene regulations enacted very recently (MedHygVO), in the light of our analysis, can be interpreted in a similar manner due to the requirement of a stricter hygiene regimen.

PIN118

ESTIMATING THE DIRECT MEDICAL COST, LENGTH OF STAY AND IMPACT OF REIMBURSEMENT CHANGE ON HEALTH CARE ASSOCIATED INFECTIONS

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OBJECTIVES: In 2008, the Centers for Medicare and Medicaid Services discontinued reimbursement for health care associated infections (HAIs) not reported to be present-on-admission (POA). The study objectives were to examine: (1) the impact of this reimbursement change on hospital-level HAI rates; and (2) the differences in total direct medical costs and length of stay (LOS) between patients with HAI (cases) and without HAI (controls). **METHODS:** We conducted a retrospective, interrupted time series analysis using the Nationwide Inpatient Sample obtained from the Health care Cost and Utilization Project database for years 2006 to 2010. The primary outcome was diagnosis of HAI, identified based on ICD-9-CM codes for sepsis, pneumonia, surgical site infections, catheter-associated urinary tract infections or blood stream infections from a pool of "at-risk" patients defined as ≥ 18 years of age, without a diagnosis of cancer, HIV/AIDS or immunocompromised condition. Patients with an LOS ≤ 2 days were excluded to avoid inclusion of patients with pre-existing infections. Differences in total direct medical costs and LOS of propensity score-matched cases and controls were assessed using Wilcoxon signed-rank tests. **RESULTS:** The HAI rate was higher in the "at-risk" population (12.95 vs. 2.83 per 100 admissions) than in the total inpatient population, ≥ 18 years of age. Discontinuation of reimbursement for HAI was associated with a 0.37 point (-0.375, p = 0.0064) decrease in HAI rate per 100 admissions for "at-risk" patients. Compared to controls, cases had significantly higher mean annual total direct medical costs ($15,313 ± 17,470 vs. $21,561 ± 31,718, p<0.0001) and a higher mean LOS (7.1 ± 6.5 vs. 10.2 ± 11.3 days, p< 0.0001). **CONCLUSIONS:** Total direct medical costs and LOS are higher for patients with HAI compared to those without HAI. Policy changes in the reimbursement of HAI cases made in 2008 showed a reduction in the rate of HAIs in the "at-risk" population.

PIN119

EVALUATION OF THE EFFECTIVENESS OF IMPLEMENTING AN ANTIMICROBIAL STEWARDSHIP PROGRAM IN A MEDICAL CENTER IN TAIWAN

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